

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended) An isolated polynucleotide comprising a liver-specific expression control sequence from a fish; wherein said expression control sequence modulates expression of a vertebrate liver fatty acid binding protein (L-FABP).

Claim 2. (deleted)

Claim 3. The isolated polynucleotide of claim 1, wherein said fish is a zebrafish.

Claim 4. (currently amended) The isolated polynucleotide of claim 1, wherein said polynucleotide comprises binding sites for HFH(1) having ~~[[a]]~~the nucleotide sequence of SEQ ID NO:4, HFH(2) having ~~[[a]]~~the nucleotide sequence of SEQ ID NO:5, HNF-1 α having ~~[[a]]~~the nucleotide sequence of SEQ ID NO:6, and HNF-3 β having ~~[[a]]~~the nucleotide sequence of SEQ ID NO:7.

Claim 5. (currently amended) The isolated polynucleotide of claim 4, further comprising binding sites for PDX1 having ~~[[a]]~~the nucleotide sequence of SEQ ID NO:8 and/or PDX2 having ~~[[a]]~~the nucleotide sequence of SEQ ID NO:9.

Claim 6. (currently amended) The isolated polynucleotide of claim 1, wherein said liver-specific expression control sequence comprises ~~[[a]]~~the nucleic acid sequence of SEQ ID NO:1 or a functional variant thereof having at least 80% homology to said nucleic acid sequence.

Claim 7. (currently amended) The isolated polynucleotide of claim 6, wherein said nucleic acid sequence is isolated from upstream region of a gene encoding a

zebrafish L-FABP.

Claim 8. (currently amended) The isolated polynucleotide of claim [[1]]6, wherein said nucleic acid sequence of SEQ ID NO:1 or a functional variant thereof comprises binding sites for HFH(1) having [[a]]the nucleotide sequence of SEQ ID NO:4, HFH(2) having [[a]]the nucleotide sequence of SEQ ID NO:5, HNF-1 α having [[a]]the nucleotide sequence of SEQ ID NO:6, and HNF-3 β having [[a]]the nucleotide sequence of SEQ ID NO:7.

Claim 9. (currently amended) The isolated polynucleotide of claim 8, further comprising binding sites for PDX1 having [[a]]the nucleotide sequence of SEQ ID NO:8, and/or PDX2 having [[a]]the nucleotide sequence of SEQ ID NO:9.

Claim 10. (currently amended) The isolated polynucleotide of claim [[1]]6,, wherein said expression control sequence comprises [[a]]the nucleic acid sequence of SEQ ID NO:2 or a functional variant thereof having at least 80% homology to said nucleic acid sequence; wherein said nucleic acid sequence of SEQ ID NO:2 includes said nucleic acid sequence of SEQ ID NO:1.

Claim 11. (currently amended) The isolated polynucleotide of claim[[1]]6, wherein said expression control sequence comprises [[a]]the nucleic acid sequence of SEQ ID NO:3 or a functional variant thereof having at least 80% homology to said nucleic acid sequence; wherein said nucleic acid sequence of SEQ ID NO:3 includes said nucleic acid sequence of SEQ ID NO:1.

Claim 12. (currently amended) A recombinant construct comprising a ~~basal~~ core promoter and the isolated polynucleotide of claim 1; wherein said polynucleotide is operably linked to a heterologous reporter sequence.

Claim 13. (original) The recombinant construct of claim 12, wherein said reporter sequence encodes a green fluorescent protein (GFP).

Claim 14. (currently amended) The recombinant construct of claim 12, wherein said ~~basal~~ core promoter is one selected from the group consisting of a ~~basal~~ core promoter of zebrafish, a SV40 promoter, a CMV promoter, or a RSV promoter.

Claim 15. (withdrawn) A method for detecting L-FABP promoter activity in a eukaryotic cell comprising: introducing said recombinant construct of claim 12 into said eukaryotic cell, and detecting the presence and/or activity of said reporter sequence in the cell.

Claim 16. (withdrawn) A transgenic fish whose somatic and germ cells contain at least one genomically integrated copy of said recombinant construct of claim 12, wherein said reporter sequence expresses an expression product in a liver of said fish, both spatially and temporally during development of said fish.

Claim 17. (withdrawn) The transgenic fish of claim 16, wherein said fish is zebrafish.

Claim 18. (withdrawn) The transgenic fish of claim 16, wherein the reporter encodes a green fluorescent protein (GFP).

Claim 19. (withdrawn) A method for making a transgenic fish, comprising introducing said recombinant construct of claim 12 into a fish embryo, and allowing said fish embryo to develop into said fish; wherein said recombinant construct is integrated into a genome of said fish.

Claim 20. (withdrawn) The method according to claim 19, wherein said fish is zebrafish.

Claim 21. (withdrawn) A method for identifying an agent that enhance or suppress liver development comprising: microinjecting said agent to an embryo of said transgenic zebrafish of claim 18; allowing said transgenic zebrafish embryo to grow; and analyzing said liver development during said growth of said transgenic zebrafish visually or under a fluorescent microscope.

Claim 22. (withdrawn) The method according to claim 21, wherein said liver development is further analyzed in vitro by isolating liver cells from said transgenic zebrafish.

Claim 23. (withdrawn) A method for identifying a gene that affects liver development comprising: microinjecting an inhibitor of said gene to an embryo of said transgenic zebrafish of claim 18; allowing said transgenic zebrafish embryo to grow; and monitoring said liver development during said growth of said transgenic zebrafish visually or under a fluorescent microscope.

Claim 24. (withdrawn) The method according to claim 23, wherein said inhibitor of said gene is morpholino antisense oligonucleotides and said gene is hhex and zXbp-1.

Claim 25. (withdrawn) A method for identifying a mutant that generates a liver disease comprising: microinjecting a mutagen to or UV-irradiating an embryo of said transgenic zebrafish of claim 18; allowing said zebrafish embryo to grow; and selecting a mutant by monitoring a progression of said liver disease during said growth of said transgenic zebrafish visually or under a fluorescent microscope.

Claim 26. (withdrawn) The method according to claim 25, wherein said liver disease is liver necrosis.

Claim 27. (withdrawn) The method according to claim 26, wherein said liver

necrosis is due to lumpazi, gammler, and tramp mutations.

Claim 28. (withdrawn) The method according to claim 26, wherein said liver necrosis is due to beefeater mutation.

Claim 29. (withdrawn) The method according to claim 25, wherein said liver disease is liver cancer.